

REMARKS/ARGUMENTS

Summary

Claims 2, 4, 6,7 and 10-12 are pending in the application. Claims 2, 4, 7, 11 and 12 have been amended. Claims 2, 4, 6, 7 and 10-12 are pending in the application. The amendments to the claims are supported in the specification. No new matter has been added.

35 U.S.C. § 112

The Examiner has rejected claims 7 and 11 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, the Examiner stated “The filtrate apertures recited in these claims have no antecedent basis.”

Applicants have amended claims 7 and 11 to overcome these rejections. Applicants respectfully request the Examiner withdraw this rejection and allow claims 7 and 11.

35 U.S.C. § 102

A. Claims 2 and 12

In the Office action, the Examiner rejected claims 2 and 12 under 35 U.S.C. §102(a)/(b) as being anticipated by Schmidt et al. (U.S. Patent No. 6,916,420) or Rogemont (U.S. Patent No. 4,701,234), or Applicant’s own admission, figures 1, 3 and 4

of the disclosure; and anticipated by Grummert et al. (U.S. Patent No. 6,368,505).

Applicants have amended claim 12. Applicants respectfully traverse this rejection.

Amended claim 12 recites, “wherein the plurality of longitudinal-opposed feed and the plurality of longitudinal-opposed retenate apertures extend into the filtration passageways to define a plurality of filtrate channels that have a uniform flow to the plurality of aperture seals.” Thus, the structure of claim 12 provides a means to extend the plurality of longitudinal-opposed feed and the plurality of longitudinal-opposed retenate apertures that extend into the filtration to define a plurality of filtrate channels that have a uniform flow to the plurality of seals where there are without dead spots. (Specification, page 10, lines 24-27).

With respect to Schmidt et al., the invention provides “an improved wide passage cross-flow filtration cassette is disclosed that incorporates an open mesh matrix retenate spacer that is dimensional and oriented so as to improve flux and cause turbulence in the flow of flow fluids through the cassette.” (Abstract). Also, the invention shows a cross-flow filtration cassette 1 that includes a multiplicity of adjacent flat filtration cells arranged in a stack. (Column 3, lines 29-33). However, Schmidt et. al. does not anticipate, suggest or disclose a means to extend a plurality of longitudinal-opposed feed and a plurality of longitudinal-opposed retenate apertures that extend into the filtration to define a plurality of filtrate channels that have a uniform flow to the plurality of seals where there are without dead spots.

For Rogemont al., this invention provides “The process of the invention concerns the manufacture of an interposed support of semipermeable microfiltration membranes,

the support composed of a permeable mesh and a sealed border of elastomeric material.”
(Abstract). However, Rogemont et. al. does not anticipate, suggest or disclose a means to extend the plurality of longitudinal-opposed feed and the plurality of longitudinal-opposed retenate apertures that extend into the filtration to define a plurality of filtrate channels that have a uniform flow to the plurality of seals where there are without dead spots.

With regard to the Applicants’ own admission, figures 1, 3 and 4 of the disclosure. Figures 1, 3 and 4 do not anticipate suggest or disclose a means to extend the plurality of longitudinal-opposed feed and the plurality of longitudinal-opposed retenate apertures that extend into the filtration to define a plurality of filtrate channels that have a uniform flow to the plurality of seals where there are without dead spots. In fact, Figures 3 and 4 show specifically that the passageway 52 and passageway 72 will develop dead spots 66 and dead spots 86. (Specification, page 4, lines 13-26). This invention is utilized to overcome the aspects of Figures 1, 3 and 4 in order to get rid of dead spots or other flow non-uniformities. Thus, the Figures 1, 3 and 4 does not suggest, anticipate or disclose providing a means to extend the plurality of longitudinal-opposed feed and the plurality of longitudinal-opposed retenate apertures that extend into the filtration to define a plurality of filtrate channels that have a uniform flow to the plurality of seals where there are without dead spots.

Grummert et al. provides an “improved cross-flow filter cassettes for the filtration of liquid media, which are used in cross-flow filtration devices of varying pump outputs that can be fitted with non-reinforced membranes. The cassettes comprise at least one

retenate separator in which the inlets to the open perforations designed to form one type of channel, for example for retenate discharge, are larger than the inlets to the open perforations designed to form another type of channel, for example for fluid feed.”

(Abstract). The cross-filter cassette includes a retenate spacer 2 made up of a fabric 1 and having holes 3, 4, 5 where the holes are open and form fluid feed channels 6. (Column 3, lines 55-62). However, Grummert et al. does not suggest, anticipate or disclose providing a means to extend the plurality of longitudinal-opposed feed and the plurality of longitudinal-opposed retenate apertures that extend into the filtration to define a plurality of filtrate channels that have a uniform flow to the plurality of seals where there are without dead spots.

Thus, Schmidt, alone or in combination with Rogemont, Grummert et al. and Applicants’ admitted Figures 1, 3 and 4 do not anticipate, suggest or disclose a means to extend the plurality of longitudinal-opposed feed and the plurality of longitudinal-opposed retenate apertures that extend into the filtration to define a plurality of filtrate channels that have a uniform flow to the plurality of seals where there are without dead spots.

Accordingly, Applicants respectfully submit that the amended claim 12 is allowable. Claim 2, which depends from independent claim 12, is allowable because independent claim 12 is allowable. Applicants respectfully request that the rejection be withdrawn and claim 2 as amended be allowed.

b. Claim 4

In the Office action, the Examiner rejected claims 4 and 5 under 35 U.S.C. §102(a)/(b) as being anticipated by Grummert, et al. or Schmidt et al. or Rogemont or Applicants' own admission, figures 1, 3 and 4 of the disclosure. Applicants have added amended claim 12 and cancelled claim 1. Applicants respectfully traverse this rejection.

Since the new independent claim 12 is patentable because it overcomes the Examiner's rejections to Grummert et al., Schmidt et al. in view of Rogemont et al. as discussed above, this amended independent claim 12 and dependent claim 4 overcomes the Examiner's rejections. Applicants request the Examiner to withdraw the rejection of claim 4 as amended.

C. Claims 6, 7, 10 and 11

In the Office action, the Examiner rejected claims 6, 7, 10 and 11 under 35 U.S.C. §102(a)/(b) as being anticipated by Grummert, et al. or Schmidt et al. or Rogemont et al. or Applicants' own admission, figures 1, 3 and 4 of the disclosure. Applicants have amended claim 12. Applicants respectfully traverse this rejection.

Since the amended claim 12 is patentable because it overcomes the Examiner's rejections to Grummert et al., Schmidt et al. in view of Rogemont et al. as discussed above, this amended claim 12 and dependent claims 6, 7, 10 and 11 overcome the Examiner's rejections. Applicants request the Examiner to withdraw the rejection of claims 6, 7, 10 and 11 as amended.

Conclusion

Pending claims 2, 4, 6, 7 and 10-12 are patentable. Therefore, in view of the above amendments, Applicants respectfully submit that this application is in condition for allowance and such action is earnestly requested. If for any reason, however, the Examiner feels that a telephone interview would be helpful in resolving any remaining issues the Examiner is respectfully requested to contact Applicants' undersigned attorney.

Applicants respectfully assert that the claims are in allowable form and earnestly solicit the allowance of the claims 2, 4, 6, 7 and 10-12.

Respectfully submitted,

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